

**Notice of Allowability**

Application No.

10/766,244

Applicant(s)

LI ET AL.

Examiner

Sanh D. Phu

Art Unit

2618

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment filed on 3/1/2007.
2. ☒ The allowed claim(s) is/are 1-10, 12-25, 27-40, 42-45 and 47-56.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 3/1/07
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 3/1/07.

Accordingly, claims 1-10, 12-25, 27-40, 42-45 and 47-56 are currently pending; and claims 11, 26, 41 and 46 are canceled.

### REASONS FOR ALLOWANCE

2. Claims 1-10, 12-25, 27-40, 42-45 and 47-56 are allowed.
3. References 6452964, 6154489 and 20030231706 are additionally cited because they are pertinent to the claimed invention.
4. The following is an examiner's statement of reasons for allowance:

-Regarding to independent claims 1 and 47, none of prior art of record teaches or suggests a method for communicating a signal, as claimed. Walton et al (2003/0112880), previously cited, teaches the claimed method except he at least fails to teach a procedure of determining a modification as claimed. Walton et al procedure of determining lacks of processes of adjusting a first set of modulation features of a plurality of modulation features while maintaining a second set of modulation features of the plurality of modulation features, if a first bit value for a power-control bit at a first time period corresponds to a

second bit value for a power-control bit at a second time period; and adjusting the second set while maintaining the first set, if the first bit value differs from the second bit value. It would not have been obvious for a person skilled in the art to additionally implement Walton et al procedure of determining with processes of adjusting a first set of modulation features of a plurality of modulation features while maintaining a second set of modulation features of the plurality of modulation features, if a first bit value for a power-control bit at a first time period corresponds to a second bit value for a power-control bit at a second time period; and adjusting the second set while maintaining the first set, if the first bit value differs from the second bit value, for leading such the implementation to the claimed invention.

-Regarding to independent claim 16, none of prior art of record teaches or suggests a system for communicating a signal, as claimed. Walton et al teaches the claimed system except he at least fails to teach a signal modifier as claimed. Walton et al signal modifier lacks of being operable to determine a modification according to one or more quality indicators by: adjusting a first set of modulation features of a plurality of modulation features while

maintaining a second set of modulation features of the plurality of modulation features, if a first bit value for a power-control bit at a first time period corresponds to a second bit value for a power-control bit at a second time period; and adjusting the second set while maintaining the first set, if the first bit value differs from the second bit value. It would not have been obvious for a person skilled in the art to additionally implement Walton et al signal modifier with processes of adjusting a first set of modulation features of a plurality of modulation features while maintaining a second set of modulation features of the plurality of modulation features, if a first bit value for a power-control bit at a first time period corresponds to a second bit value for a power-control bit at a second time period; and adjusting the second set while maintaining the first set, if the first bit value differs from the second bit value, for leading such the implementation to the claimed invention.

-Regarding to independent claim 31, none of prior art of record teaches or suggests logic for communicating a signal, as claimed. Walton et al teaches the claimed logic except he at least fails to teach a procedure of determining a modification as claimed. Walton et al procedure of determining lacks of

processes of adjusting a first set of modulation features of a plurality of modulation features while maintaining a second set of modulation features of the plurality of modulation features, if a first bit value for a power-control bit at a first time period corresponds to a second bit value for a power-control bit at a second time period; and adjusting the second set while maintaining the first set, if the first bit value differs from the second bit value. It would not have been obvious for a person skilled in the art to additionally implement Walton et al procedure of determining with processes of adjusting a first set of modulation features of a plurality of modulation features while maintaining a second set of modulation features of the plurality of modulation features, if a first bit value for a power-control bit at a first time period corresponds to a second bit value for a power-control bit at a second time period; and adjusting the second set while maintaining the first set, if the first bit value differs from the second bit value, for leading such the implementation to the claimed invention.

-Regarding to independent claim 48, none of prior art of record teaches or suggests a method for communicating a signal, as claimed, wherein the

method comprises procedures of establishing an adjusted quality indicator at a first communication device, the adjusted quality indicator indicating a quality of a communication link between the first communication device and a second communication device based on an adjusted transmission from said first communication device, wherein signals transmitted on a first and second antenna elements have an adjusted phase modulation, said adjusted phase modulation comprising phase modulation adjusted from a initial phase modulation in a first direction; determining a phase modification according to a comparison of an initial quality indicator and the adjusted quality indicator, wherein: if said adjusted quality indicator demonstrates degradation of quality relative to said initial quality indicator, then said phase modification is in the direction opposite to said first direction, and if said adjusted quality indicator demonstrates improvement of quality relative to said initial quality indicator, then said phase modification is enhanced in the direction of said first direction, and modulating phase of a signal on the second antenna relative to a signal on the first antenna in accordance with the phase modulation.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

*Conclusion*

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanh D. Phu whose telephone number is (571)272-7857. The examiner can normally be reached on M-Th from 7:00-17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sanh D. Phu  
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SP

4/15/07  
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PATENT EXAMINER